This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (original) An apparatus for laser material processing comprising:

a work platform for holding a workpiece upon which a laser beam is applied;

a fluid conduit adapted to discharge fluid across the surface of the workpiece; and

a flow control means fluidly coupled to the fluid conduit, the flow control means adapted to regulate the discharge of fluid across the workpiece concurrent with the application of the laser beam.

2. (original) The apparatus of claim 1 wherein the fluid discharged across the workpiece is substantially transmissive relative to light emitted from the laser beam.

3. (original) The apparatus of claim 2 wherein the fluid is water and laser beam emits light at wavelengths between 190 and 1100 nm.

4. (original) The apparatus of claim 1 further comprising:

a propellant conduit adapted to discharge propellant, the propellant conduit fluidly coupled to the fluid conduit; and

a nozzle fluidly coupled to the fluid conduit whereby the fluid is discharged across the workpiece by the propellant.

5. (original) The apparatus of claim 4 further comprising an atomizing means for discharging the fluid and propellant together as a spray.

6. (original) The apparatus of claim 4 wherein the propellant is substantially transmissive relative to light emitted from the laser beam.

7. (original) The apparatus of claim 6 wherein the propellant is nitrogen.

8. (original) The apparatus of claim 6 wherein the propellant is helium.

9. (original) The apparatus of claim 6 wherein the propellant is argon.

10. (original) The apparatus of claim 6 wherein the propellant is carbon dioxide.

11. (original) The apparatus of claim 1 further comprising a fluid vacuum adapted to withdraw fluid discharged across the workpiece.

12. (original) The apparatus of claim 1 further comprising a computer processor communicatively coupled to the flow control means.

13. (original) The apparatus of claim 4 further comprising a computer processor communicatively coupled to the nozzle.

14. (original) The apparatus of claim 11 further comprising a computer processor communicatively coupled to the fluid vacuum.

15. (original) The apparatus of claim 1 further comprising:

a computer processor communicatively coupled to the flow control means;

a computer readable medium communicatively coupled to the computer processor;

a fluid control module stored on the computer readable medium adapted to stop the discharge of fluid across the workpiece prior to completing a cut-through of the workpiece by the laser beam.

16. (original) The apparatus of claim 4 further comprising:

a computer processor communicatively coupled to the flow control means and the propellant conduit;

a computer readable medium communicatively coupled to the computer processor;

a fluid control module stored on the computer readable medium adapted to stop the discharge of fluid across the workpiece by closing off the fluid conduit means and removing residual fluid from the workpiece by opening the propellant conduit prior to completing a cut-through of the workpiece by the laser beam to push residual fluid off the workpiece.

17. (original) The apparatus of claim 1 further comprising:

a secondary reservoir holding at least one light-reactive chemical;

a secondary control valve disposed between the secondary reservoir and the fluid conduit whereby activation of the secondary control valve introduces the at least one light-reactive chemical into the fluid conduit.

18. (original) The apparatus of claim 1 further comprising a drainage conduit coincident to the workpiece and adapted to recover excess fluid initially discharged across the workpiece.

19. (original) The apparatus of claim 18 wherein the drainage conduit is fluidly coupled to the fluid conduit whereby excess fluid is recirculated.

20. (original) The apparatus of claim 19 further comprising a filter disposed in fluid communication between the drainage conduit and fluid conduit.

21. (original) An apparatus for laser material processing comprising:

a work platform for holding an workpiece upon which a laser beam is applied; and

a liquid absorbing covering placed over the workpiece, the covering adapted to be cut through by the laser beam.

22. (original) A laser material processing method comprising the steps of:

discharging a film of fluid over a workpiece and applying a laser beam to the workpiece.

23. (original) The method of claim 22 further comprising the step of preselecting a fluid that is substantially transmissive relative to light emitted from the laser beam.

24. (original) The method of claim 23 wherein the preselected fluid is water and the laser beam emits light at wavelengths between 190 and 1100 nm.

25. (original) The method of claim 22 further comprising the step of introducing a propellant into the fluid.

26. (original) The method of claim 25 further comprising the step of preselecting a propellant that is substantially transmissive relative to light emitted from the laser beam.

27. (original) The method of claim 25 wherein the propellant is nitrogen.

28. (original) The method of claim 25 wherein the propellant is helium.

29. (original) The method of claim 25 wherein the propellant is argon.

30. (original) The method of claim 25 wherein the propellant is carbon dioxide.

31. (original) The method of claim 22 further comprising the step of withdrawing excess fluid discharged across the workpiece.

32. (original) The method of claim 22 further comprising the step of providing a computer processor adapted to control the discharge of fluid across the workpiece.

33. (original) The method of claim 31 further comprising the step of providing a computer processor adapted to control the withdraw of excess fluid from the workpiece.

34. (original) The method of claim 22 further comprising the step of ceasing the discharge of fluid across the workpiece prior to the laser beam completing a cut-through of the workpiece.

35. (original) The method of claim 34 further comprising the step of pushing residual liquid from the workpiece by propellant injection prior to the laser beam completing a cut-through of the workpiece.

36. (original) The method of claim 22 further comprising the step of introducing at least one light-reactive chemical onto the workpiece.

37. (new) A system for liquid-assisted, laser material processing, comprising:

an ultraviolet (UV) laser for emitting an UV laser beam;

a translation stage for mounting a workpiece for exposure to the UV laser beam;

an imaging system for imaging the beam to the workpiece;

a nozzle coupled to a liquid reservoir, which contains a liquid, for propelling a fine spray of the liquid onto the workpiece,

the liquid being substantially non-photoabsorbing around a primary UV wavelength of the UV laser beam, and

wherein the translation stage is movable relative to the UV laser beam in at least two dimensions that are substantially in a plane of the workpiece, such that by translating the stage, a substantial surface area of the workpiece may be machined by exposure to the incident UV laser beam.

38. (new) The system of claim 37, wherein the nozzle is directed at the workpiece.

39. (new) The system of claim 37, wherein the fine spray becomes a mist as the liquid settles onto the workpiece.

40. (new) The system of claim 37, wherein the liquid substantially comprises water.

41. (new) The system of claim 37, wherein the imaging system comprises a focusing lens.

42. (new) The system of claim 37, wherein the fine spray becomes a thin layer of the liquid flowing over an application region of the workpiece.

43. (new) The system of claim 42, wherein the thin layer is less than 100 microns thick.

44. (new) The system of claim 42, wherein the thin layer is between 25 and 60 microns thick.

45. (new) The system of claim 42, wherein the thin layer is between 25 and 50 microns thick.

46. (new) The system of claim 42, wherein the thin layer just thick enough to be maintained as a continuous sheet of liquid over the application region of the workpiece.

47. (new) The system of claim 42, wherein the application region comprises a few square millimeters of surface area of the workpiece.

48. (new) The system of claim 42, wherein the thin layer flows at a flow rate of around one milliliter per minute.

49. (new) The system of claim 37, wherein the nozzle is further coupled with a propellant for assisting in the propelling of the fine spray of the liquid.

50. (new) The system of claim 49, wherein the propellant includes a pressurized gas that is not substantially photoabsorbing around a primary UV wavelength of the UV laser beam.

51. (new) The system of claim 50, wherein the pressure of the pressurized gas is between 5 and 100 psi.

52. (new) The system of claim 50, wherein the pressure of the pressurized gas is around 18 psi.

53. (new) The system of claim 37, wherein the nozzle defines an orifice around 300 microns across.

54. (new) The system of claim 37, further comprising a wet suction system for drawing the liquid from the workpiece.

55. (new) The system of claim 37, further comprising a collection tray for collecting the liquid as it runs off of the workpiece.

56. (new) A method of liquid-assisted, laser material processing, comprising:

mounting a workpiece on a translation stage;

generating an ultraviolet (UV) laser beam;

imaging the UV laser beam onto the workpiece;

propelling a fine spray of liquid onto the workpiece during exposure of the workpiece to the UV laser beam, where the liquid is not substantially photoabsorbing around a primary UV wavelength of the UV laser beam; and

translating the workpiece on the translation stage relative to the UV laser beam in at least two dimensions that are substantially in a plane of the workpiece, such that by translating the stage, a substantial surface area of the workpiece may be machined by exposure to the incident UV laser beam.

57. (new) The method of claim 56, wherein the fine spray of liquid is propelled directly at the workpiece.

58. (new) The system of claim 56, wherein the fine spray of liquid becomes a mist as the liquid settles onto the workpiece.

59. (new) The method of claim 56, wherein the liquid substantially comprises water.

60. (new) The method of claim 56, wherein the imaging step includes focusing the UV laser beam at the workpiece.

61. (new) The method of claim 56, wherein the fine spray of liquid is propelled so that it becomes a thin layer of the liquid flowing over an application region of the workpiece.

62. (new) The method of claim 61, wherein the thin layer is less than 100 microns thick.

63. (new) The method of claim 61, wherein the thin layer is between 25 and 60 microns thick.

64. (new) The method of claim 61, wherein the thin layer is between 25 and 50 microns thick.

65. (new) The method of claim 61, wherein the thin layer is just thick enough to be maintained as a continuous sheet of liquid over the application region of the workpiece.

66. (new) The method of claim 61, wherein the application region comprises a few square millimeters of surface area of the workpiece.

67. (new) The method of claim 61, wherein the thin layer flows at a flow rate of around one milliliter per minute.

68. (new) The method of claim 56, wherein the propelling step includes coupling a propellant with the liquid for assisting in the propelling of the fine spray of the liquid.

69. (new) The method of claim 68, wherein the propellant includes a pressurized gas that is not substantially photoabsorbing around a primary UV wavelength of the UV laser beam.

70. (new) The method of claim 69, wherein the pressure of the pressurized gas is between 5 and 100 psi.

71. (new) The method of claim 69, wherein the pressure of the pressurized gas is around 18 psi.

72. (new) The method of claim 56, wherein the nozzle defines an orifice around 300 microns across.

73. (new) The method of claim 56, further comprising the step of drawing the liquid from the workpiece.

74. (new) The method of claim 56, further comprising the step of collecting the liquid as it runs off of the workpiece.

75. (new) A method of liquid-assisted, laser material processing, comprising:

generating an ultraviolet (UV) laser beam;

propelling a fine spray of a liquid onto a workpiece to generate flow of the liquid across an application area of the workpiece, wherein the liquid is not substantially photoabsorbing around a primary UV wavelength of the UV laser beam;

imaging the UV laser beam onto the application area workpiece; and

wherein a thickness of the flow of liquid across the application area of the workpiece is less than 100 μm.

76. The method of claim 75 further including:

mounting the workpiece to a translation stage; and

translating the workpiece on the translation stage relative to the UV laser beam in at least two dimensions that are substantially in a plane of the workpiece, such that by translating the stage, a substantial surface area of the workpiece may be machined by exposure to the incident UV laser beam.

77. (new) The method of claim 75, wherein the fine spray of liquid is propelled directly at the workpiece.

78. (new) The method of claim 75, wherein the liquid substantially comprises water.

79. (new) The method of claim 75, wherein the imaging step includes focusing the UV laser beam at the workpiece.

80. (new) The method of claim 75, wherein the thickness of the flow is between 25 and 60 microns thick.

81. (new) The method of claim 75, wherein the thickness of the flow is between 25 and 50 microns thick.

82. (new) The method of claim 75, wherein the thickness of the flow is just thick enough to be maintained as a continuous sheet of liquid over the application area of the workpiece.

83. (new) The method of claim 75, wherein the application area comprises a few square millimeters of surface area of the workpiece.

84. (new) The method of claim 75, wherein the flow of liquid is at a flow rate of around one milliliter per minute.

85. (new) The method of claim 75, wherein the propelling step includes coupling a propellant with the liquid for assisting in the propelling of the fine spray of the liquid.

86. (new) The method of claim 85, wherein the propellant includes a pressurized gas that is not substantially photoabsorbing around a primary UV wavelength of the UV laser beam.

87. (new) The method of claim 86, wherein the pressure of the pressurized gas is between 5 and 100 psi.

88. (new) The method of claim 86, wherein the pressure of the pressurized gas is around 18 psi.